

March 18, 2016

MEMORANDUM FOR: Distribution Email

FROM: Christine Caruso Magee
Configuration Manager, NCEP Central Operations

SUBJECT: Scheduled Operational Changes and Upgrades for
CPC, OPC, and WPC

Climate Prediction Center

The following accelerated items were implemented this past week:

None

The following will be implemented the week of March 21, 2016:

RFC #605 – Africa_RFE v1.0.0 – Implement into operations a new process called the Africa RFC (Rainfall Estimator) for International Desk monitoring activities. To be implemented on March 21 at 1600Z.

The following RFCs are in progress:

None

The following NCO RFCs to be implemented the week of March 21, 2016 may affect CPC:

RFC #1787 – grib_util v1.0.2 - Update the grib_util to v1.0.2 to recompile the grib utilities source code with the latest g2 library v2.5.1. This fixes the memory leak issue especially for copygb2. The gfs upgrade currently in parallel points to the new copygb2 in the grib_util package. This is being implemented on the IBMs only. To be implemented on March 21 at 1200Z.

RFC #1790 - IBM will make the following changes to the system software on the Cray systems:

1) remove software from /gpfs/hps/usrx/local base directory that is now in

/gpfs/hps/usrx/local dev or prod

2) install perl modules in /gpfs/hps/usrx/local

3) make software in /opt/cray inaccessible to users. Users should use the versions in usrx/local dev and prod.

4) sync /usrx/local/prod HDF4, HDF5, NetCDF4.2, png1.2.49 and zlib1.2.7 from Surge to Luna. To be implemented on March 21 at 1700Z.

RFC #1796 – LSF v9.1.2 – On the Crays, modify the LSF queue configurations to reject all jobs with memory specifications greater than 3GB submitted to the following queues: devonprod, hpc_cray, prenpst, preprod, prod, debug, dev, devhigh, devmax, prod. This will maximize job slot efficiency on MAMU nodes for jobs executing parallel tasks via aprun. To be implemented on March 22 at 1700Z.

RFC #1802 – Decommission cpccf4-6, 10-12 VMs. CPC has already moved their operations to the RHEL5 CPCCF VMs. The older RHEL5 systems are being re-purposed as dev and QA systems. To be implemented on March 24 at 1400Z.

RFC #1803 – Enable sudo for CPC production accounts cpcfcst, cpcobs, cpcwebs, cpccdata, cwlincs, and cpccsat, so that CPC users will be able to sudo CPC production accounts. To be implemented on March 24 at 1500Z.

The following NCO RFCs are in progress and may affect CPC:

RFC #1756 - NetCDF4-Python v4-1.2.1 - IBM will install the Python NetCDF4 software on Luna and Surge in /gpfs/hps/usrx/local/prod. This software reads and writes NetCDF files. Implementation began on March 7 at 1600Z and should be completed by March 21.

Ocean Prediction Center

The following accelerated items were implemented this past week:

None

The following will be implemented the week of March 21, 2016:

None

The following RFCs are in progress:

None

The following NCO RFCs to be implemented the week of March 21, 2016 may affect OPC:

RFC #1787 – grib_util v1.0.2 - Update the grib_util to v1.0.2 to recompile the grib utilities source code with the latest g2 library v2.5.1. This fixes the memory leak issue especially for copygb2. The gfs upgrade currently in parallel points to the new copygb2 in the grib_util package. This is being implemented on the IBMs only. To be implemented on March 21 at 1200Z.

RFC #1789 – MRMS v10.5.4 - The pqact.conf file on MRMS ldmstore[a/b] will be updated to match the work tested on the NCO QA tier. This will create additional files on the mounted /common/data/apps/mrms/ops/system[a/b] directories to fulfill internal IDP user requests. An additional tweak to the timing of the w2merger processes will be implemented on the mrms-k/hi/trop-[a/b] VMs to reduce data rejections as requested by MRMS users. To be implemented on March 21 at 1300Z.

RFC #1790 - IBM will make the following changes to the system software on the Cray systems:

- 1) remove software from /gpfs/hps/usrx/local base directory that is now in /gpfs/hps/usrx/local dev or prod
- 2) install perl modules in /gpfs/hps/usrx/local
- 3) make software in /opt/cray inaccessible to users. Users should use the versions in usr/local dev and prod.
- 4) sync /usrx/local/prod HDF4, HDF5, NetCDF4.2, png1.2.49 and zlib1.2.7 from Surge to Luna. To be implemented on March 21 at 1700Z.

RFC #1796 – LSF v9.1.2 – On the Crays, modify the LSF queue configurations to reject all jobs with memory specifications greater than 3GB submitted to the following queues: devonprod, hpc_cray, prenpod, preprod, prod, debug, dev, devhigh, devmax, prod. This will maximize job slot efficiency on MAMU nodes for jobs executing parallel tasks via aprun. To be implemented on March 22 at 1700Z.

The following NCO RFCs are in progress and may affect OPC:

None

The following NCO RFCs, which may affect OPC, were approved with an implementation date TBD:

RFC #1357 – RTOFS global v1.1.0 – Major upgrade of the Global RTOFS model. See the TIN at: <http://www.nws.noaa.gov/os/notification/tin15-36global-rtofsaaa.htm> for details. This was advertised as having an October 6 implementation date but this implementation is being postponed due to a delay in the Navy's HYCOM model upgrade. Once the HYCOM upgrade is implemented, the Global RTOFS will be scheduled for implementation. The Navy hopes to upgrade HYCOM in FY16Q3. Notification will be given in advance so users may prepare for any changes which may affect them. This upgrade of the Global RTOFS was approved by the NCEP Director.

Weather Prediction Center

The following accelerated items were implemented this past week:

None

The following will be implemented the week of March 21, 2016:

None

The following RFCs are in progress:

None

The following NCO RFCs to be implemented the week of March 21, 2016 may affect WPC:

RFC #1789 – MRMS v10.5.4 - The pqact.conf file on MRMS Idmstore[a/b] will be updated to match the work tested on the NCO QA tier. This will create additional

files on the mounted /common/data/apps/mrms/ops/system[a/b] directories to fulfill internal IDP user requests. An additional tweak to the timing of the w2merger processes will be implemented on the mrms-k/hi/trop-[a/b] VMs to reduce data rejections as requested by MRMS users. To be implemented on March 21 at 1300Z.

RFC #1791 – NCODF Dataflow v3.2.0 - The LDM software on ncdf1/2 will be modified to begin saving files that contain three dimensional solutions to the quasigeostrophic omega, geopotential tendency, and Zwack-Okossi development equations for use by WPC. In the future, this data has the potential to reduce the need to transmit model data on lower resolution grids. IWSB will also make a new data container for these files on the NetApp. To be implemented on March 22 at 1200Z.

The following NCO RFCs are in progress and may affect WPC:

None

Please note that security-related RFCs are never listed in the RFC memo.

---- OPERATIONAL ANNOUNCEMENTS ----

The CPC/OPC/WPC Configuration Management documents are available at <https://sites.google.com/a/noaa.gov/nws-ncep-nco-cm/>.

Please review these documents if you have questions prior to submitting changes for CPC/OPC/WPC configurable items.